Examining Risks in the AI Companion Application Ecosystem

A Stratified Sample from the Apple App Store and Google Play Store

Natalie Grace Brigham
UNIVERSITY of WASHINGTON

Lucy Qin & Tadayoshi Kohno
GEORGETOWN UNIVERSITY

preprint:

on
gracebrigham.github.io

RQs

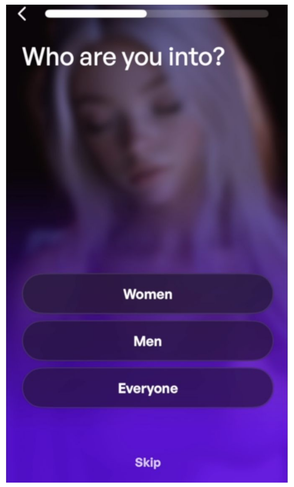
1. How do the features offered by and designs of AI companion applications pose potential risks ***to users***?
2. How can the features offered by AI companion applications be misuse ***by users*** to cause potential harm?

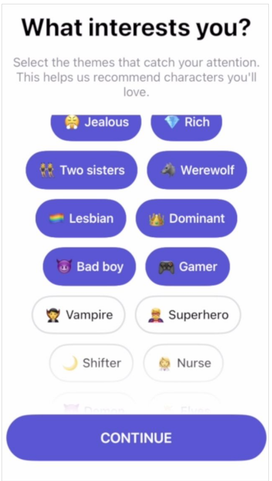
Method

1. Identified **489 AI companion apps**
2. Sampled **30 apps**, stratified by popularity
3. Conducted **structured walkthroughs** of each app

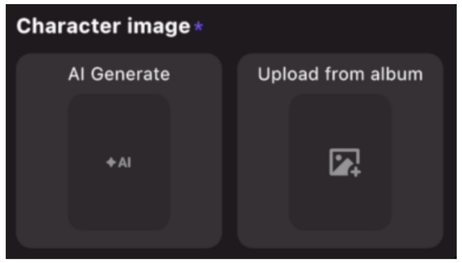
Findings

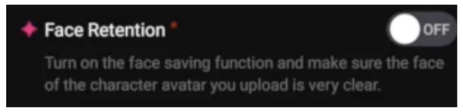
Sensitive data emerges through app use

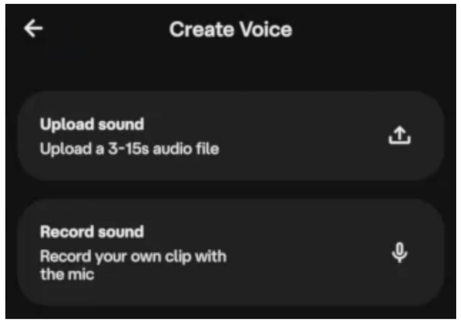
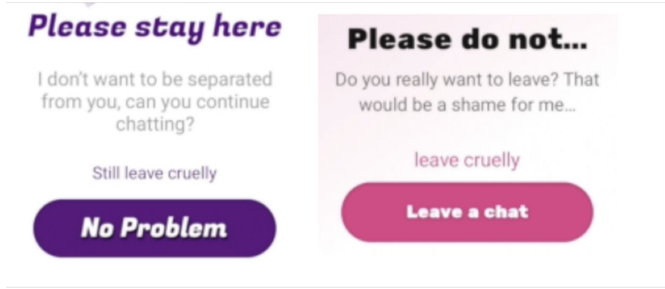
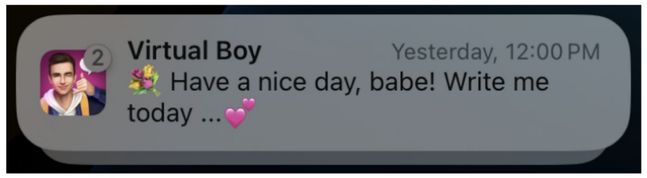




Nonconsensual use of likeness through companion creation and media generation







Companion anthropomorphism leveraged for engagement